

PAN ASIA NETWORKING

AN IDRC
PROGRAM INITIATIVE
FOR ASIA

PROSPECTUS
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INFORMATION AND COMMUNICATION TECHNOLOGIES FOR DEVELOPMENT

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INTRODUCTION

Innovation in the deployment of ICTs fuels trade and commerce in today's global economy. The Pan-Asia Networking Program (PAN Asia) is working with Asian institutions to help them come to grips with a complex range of issues relating to the information society. PAN Asia builds on 25 years of work in the area of information sciences. Since 1993/94, however, it has evolved in new ways and now focuses on the application of Internet technologies for development.

In its 1997 prospectus, PAN Asia's mission was defined as establishing efficient communications and networking among developing country research and development institutions, NGOs and development workers with a view to solving development problems. This mission was set out in relation to four specific objectives, dealing respectively with: (i) connectivity infrastructure; (ii) content development; (iii) communications and networking; and (iv) collaborative research on ICTs and policies.

Since its inception, PAN Asia has done some excellent work in the region, specifically:

- supporting the first Internet Service Providers (ISPs) in the least-developed countries in Asia;
- experimenting with rural access through telecentre development;
- fostering virtual networking of PAN Asia's partners;
- experimenting with e-commerce innovations and business models;
- developing web sites and web-based applications; and,
- providing hands-on training and mentoring of our partners.

PAN Asia has been particularly successful in its initial support to research partners in several least developed countries of Asia, where it has helped them to gain basic access to the Internet. PAN Asia has also addressed sustainability issues, particularly in remote and poor regions of the developing world, through testing of innovative public/private partnerships with ISPs and other Internet entities.

At the same time, PAN's Collaboratory, armed with in-house technological, engineering and management expertise, has enabled the program to assist developing country partners through the provision of web-based tools. They have also helped by testing new applications and by "incubating" new approaches to using ICTs for development research. PAN Asia has also helped institutions in the South build their capacity to develop and use indigenous applications.

A 1999 review of PAN Asia concluded that the initiative has been faithful to its objectives. In particular, it has been effective not only in providing stakeholders with a useful service, but also in encouraging their participation in program development. It has developed innovative approaches to private-public partnerships and has proven its ability to provide Internet services in difficult-to-reach countries. At the same time, the review identified a few weaknesses. For example, though PAN has recently built new relationships with Acacia (IDRC's African counterpart program), it still needs to improve its PAN Americas links. Similarly, the private-public partnership that PAN Asia pioneered has not yet been accompanied by appropriate changes to IDRC policies and procedures, though work

is underway in this area. PAN Asia also needs to develop a stronger ICT strategic framework to provide a clearer rationale for its priorities.

PAN Asia is now poised to shift its attention from supporting ISP capacity building towards fostering community use of the technology. This requires greater emphasis on the organization of grassroots systems and institutions and needs assessments within the local context. A second key strategic area for PAN Asia will be e-commerce, its role being to provide research insights into business models and macro-level social and economic implications and opportunities.

PAN's web site and services have opened the eyes of its research partners to the possibilities of the Internet, while its server has provided web hosting, mirroring and training to compensate for poor infrastructure and low capacities and bandwidth in parts of Asia. However, as capacities mature, infrastructure improves and new applications develop, institutions should be encouraged to shift to providers in their own countries or to experiment with new applications on the PAN server, while PAN plays more of a market-enabling and business model development role with its e-commerce partners.

The PAN Asia team is recognized throughout the development community for its technical expertise and for the solid partnerships it has built with institutions on the ground. PAN is also admired for its participatory project development and for the range of demonstrable grassroots projects that are already showing tangible outcomes. Recently, the emphasis has been on research into "hard" and "soft" technologies for community, e-commerce and distance education and learning. Some institutions have been able to extend their reach to new audiences through the PAN network, while others are experimenting with new business models developed with the support of PAN training and the PAN e-commerce site.

The New Economy

The new economy – meaning both globalization of business and the emergence of new technologies – is primarily knowledge-based. PAN Asia is well placed to play a leading role in promoting partnerships among key stakeholders in the region so that they can engage in the emerging order.

Asia comprises a diverse mix of economies. There are leaders in innovation and creativity (e.g., Japan); there are those that are already adopting and adapting ICTs (e.g., China); and there are those that have yet to engage to any extent in these innovations (e.g., Cambodia). Economies at the second level (the adopters) have yet to reach out from their capitals to provincial and district levels or into rural communities where the mass of their population resides. Countries at the lowest level, those that have yet to begin the economic transition, are dangerously poised to follow that precedent and concentrate resources in the capitals.

PAN Asia will adopt a **split strategy** in responding to the split e- market region. For digitally disadvantaged economies, it will sponsor applied research that will enhance the capacity of the least developing countries. It will also promote the productive engagement of rural people in the information-intensive new economy. On the other hand, for all sections of society in all economies, it will encourage inquiry and action (R&D) within the ICT community and will stimulate ideas and the exchange and sharing of information in support of continuing innovation.

THE OBJECTIVES OF PAN ASIA

The Vision

The PAN Asia Networking Program Initiative is based on this principle – that people who live in poverty can benefit from the positive effects of ICTs. The vision is to provide accelerated and broad access to ICTs at the community level, and especially among the urban and rural poor. The establishment of this kind of ICT-enabled environment will give people new opportunities for improving the quality of their lives in terms of education, health and employment. And those opportunities can be multiplied through networking and partnership building. PAN Asia aims to mobilize available human resources within the region to assist it in achieving this vision.

Objectives

1. To pilot demonstration, proof-of-concept, experimental and applied research ICT projects in disadvantaged communities within target countries in Asia.
2. To strengthen research and development capacity to apply ICTs in education, health, and employment at the community level.
3. To encourage, through the promotion of research collaboration and networking, advanced-technology countries in Asia to engage in capacity-building and in the coaching of slower adopting countries.
4. To network digital pioneers in the region and foster broad research partnerships for sharing and learning from each other and for articulating regional concerns at international fora.
5. To encourage governments in their ICT policy formulation and related research to give priority to enabling the spread of ICTs to remote communities.

PROGRAMMING

PAN Asia is mainly concerned with development research, which means looking at development problems in communities to see how ICTs can help improve the situation. Our project design is participatory, with planning by and with the stakeholders in the communities. Our research strategy is thus an **applied research approach** towards development. That strategy responds to certain fundamental questions, such as: “What works and what doesn’t?” “To what effect?” “Under what conditions?”

Research Rationale

1. Providing Equitable Access

We propose to contribute to efforts to bridge inequalities of access by speeding up the diffusion of ICTs in developing countries, particularly at the community level. Community development is associated with the potential of communication practices to strengthen knowledge systems. For ICTs to cause social, economic and cultural transformation and achieve sustainability, a holistic, systems approach is required. The following research questions will be addressed:

- How can villages access ICTs affordably and sustainably?
- How can the digital divide be converted into digital opportunities to benefit poorer sectors of the country?
- How can the gender divide be overcome in accessing ICTs in rural settings?
- What cultural factors are at risk in ensuring gender equity?
- What is the outcome map of technology-based interventions intended to make a difference in improving the quality of life in remote villages?

2. Deploying Appropriate ICTs in Sectoral Areas

We plan to encourage and selectively fund field experiments and pilots, particularly in socially useful and relevant areas, such as rural education, medical services and employment. Our methodologies should aim to optimize technology and cost in an integrated fashion and to test the capacity of ownership and management patterns and business models to improve the quality of life in disadvantaged societies. New ICTs must be integrated into the existing structures of organizations. To achieve permanent change, however, we must be sensitive to cultural acceptance factors and attempt to integrate ICTs into the current practices of institutions. Thus, we must study what processes lead to shifts in institutional practice. The following research questions will be addressed:

- Can distance education jump start and accelerate primary and post-secondary education in the developing world?
- What are the priorities for distance education investments in developing countries? Should investments be made in technology, content or people?
- How can the uptake of technology-based distance education be made more successful in developing Asia than it has been in the developed world?
- What innovations will enable SMEs to engage in and benefit from e-business in conditions of poor e-infrastructure?

3. Engaging Technology Engines

We propose to foster links between different levels in Asia's "split" economy. Collaboration and coaching from institutions conducting state-of-the-art research will benefit from new partnerships and the expansion of research products into new markets. Less developed institutions will benefit from access to the intellectual resources they need. The following research questions will be addressed:

- What are the conditions and incentives for establishing mutually beneficial links between the technology engines and have-nots in the region?
- What processes make for effective transfer and successful adoption of advanced ICTs?

4. Networking Innovators

We want to open up opportunities to "digital pioneers" who work under difficult conditions in the least developing countries of the region. On the other hand, there are those who work at the cutting edge of ICTs in Asia and who are leading the Asian response in regional and global fora. The latter are well positioned to help in technology transfer by networking with their less privileged counterparts. We plan to seek resources from and partnerships with other international agencies and to stage workshops and conferences to enable these groups to connect. The following research questions will be addressed:

- How can digitally-capable communities be motivated to transfer and share ICT knowledge with less experienced groups? How can South-South relationships be continuously motivated?
- How and with what tools can communities of practice document and disseminate their work for experiential sharing, technology transfer and comparative research?

5. Influencing Applied ICT Policy

There is a pressing need for policy-relevant research to feed into the policy-making process and to explore the degree of freedom the developing countries have in formulating proactive policies for sustained development in ICT. Such research would strengthen the weak participation and bargaining position of developing countries in international fora on ICTs for development. The complexity of the ICT policy-making process highlights the need to determine the role of research in supporting the policy formulation process. PAN Asia will systematically collect knowledge in areas directly relevant to policy formulation. It will also incorporate policy considerations into the research agenda and use its convening power to unite researchers for synthesizing and collaborative work at national, regional and global levels. The following research questions must be addressed:

- What ICT-related policies need to be addressed to accelerate development of the rural poor in the new economy?
- How can the diverse interests of government, the private sector and civil society be reconciled to formulate model ICT policy for the benefit of people?
- What is the future direction for public-sector ICT undertakings in terms of technical and programmatic paradigms?
- What is the impact of the convergence of technology on directing ICTs for development?

Research Themes

PAN Asia's objectives stem from a systematic needs assessment in the Asian region and conform to research themes approved under IDRC's Corporate Strategic Program Framework. These themes are: (1) Poverty reduction; (ii) people development; (iii) partnerships; (iv) opportunities; (v) networks; and (vi) learning and development. At the crux of this issue are partnering and the creation of nurturing clusters and networks of researchers for collective learning and development.

PROGRAM IMPLEMENTATION

PAN Asia has been working since 1994 to enable access and build skills in web development applications. Its efforts have permitted partner organisations in the developing countries of Asia to adopt ICTs as a means to deal with social and economic development problems. That experience, the knowledge gained and PAN Asia's history of participatory and applied approaches can now be fed into more focused and value-added research. Future work will build on the foundation of PAN Asia's first Program Initiative and, over the next four years, will focus on the following principles:

1. The grassroots as beneficiaries

A large proportion of the population in developing countries still lacks access to ICTs. PAN will work to transform Phase I experience in research on community access and telecentres into appropriate policies. Also, it will encourage private-sector investment in the required infrastructure and in good practices to promote equitable access.

2. Our partners as leading-edge players in regional and global ICT initiatives

PAN perceives itself as assisting innovation by helping to crystallize the thinking of our research partners in the South and by facilitating their collaborative work and efforts. PAN must make sure that such learning is disseminated to a broad audience. Also, it must support a process whereby research results can reach and influence policy-makers and be translated into socially equitable policies for ICT for development.

Gender Considerations

The "digital divide" in developing countries is particularly reflected in gender inequality in poor rural communities. PAN Asia will be looking for opportunities to mainstream gender-related research in the projects it supports. Our gender research approach will include the use of social analysis research tools in the life cycle of the projects. Examples of research questions related to gender are:

- What are the trends respecting women's participation rate in ICT-related fields?
- What barriers do women face?
- What are the opportunity costs in ICTs for women?
- Can ICTs provide a more level playing field for women?
- Does the information economy change the concept of "work" for women, who traditionally have to balance the dual responsibilities of work and family?
- Do ICTs empower or do they enslave women in the new economy?
- How does distance education affect the learning opportunities of women?
- How do telecentres affect the quality of life of women?
- In what ways do ICTs affect women in small and medium-sized enterprises (SMEs) in terms of production and delivery systems or the capital required to start a business or reach international markets?

PAN Asia also monitors its portfolio of projects in Asia to ensure that they are managed by a research team that is fairly gender-balanced. It will continue to encourage the participation of women.

Deliverables

- A concentration of ICT-enabling projects (such as telecentres) at the community-level.
- A core of networked projects focusing on distance education, small- and medium-sized enterprises and health care that will contribute to alleviating poverty by providing e-opportunities.
- A cluster of regional projects that network ICT innovators in the region at both institutional and individual levels.
- Selected projects that advance thinking on policy issues relevant to the above programming.

Geographic Focus

Geographic focus will allow us to concentrate our resources in countries and regions where adoption of ICTs is slow and where our intervention could make a real difference, especially in outlying and disadvantaged provinces. New project development will ideally be linked to previous PAN Asia projects. Finally, PAN Asia will work within Regional Office spheres of influences, as follows:

South Asia:	Bangladesh, Bhutan, Nepal, Pakistan and Sri Lanka.
South East/East Asia:	Cambodia, Laos, Vietnam, Tibet Autonomous Region of China, Mongolia, Indonesia and the Philippines.

Modalities for Delivery

PAN Asia will use a range of approaches for program delivery including, as its main modality, the awarding of research and development grants. As well, it will work through: (i) a research, experimentation and training laboratory; (ii) internships and a fellowships program; and, (iii) sharing, learning and dissemination of research results through workshops, seminars, conferences, website showcasing and other “closing the loop” activities. PAN Asia will also disburse funds for development research as a means to open up channels for outreach so that it can stay informed about changing requirements in the field.

The PAN Asia Collaboratory for ICT research, experimentation and training will advance the uptake of technologies applied by our partners; it will also provide training, technology transfer and interaction between PAN Asia experts and field partners. An outsourcing plan and strategy has already been initiated for the Collaboratory and for the e-Commerce Mall. We will build the capacity of an existing regional research organization (the Asian Media Information and Communication Centre). The PAN Asia Small Grants program will also be moved from Hamilton, Ontario, to the Asian community.

Monitoring and Evaluation

Thematic evaluations of specific projects and delivery modalities will be conducted. We will encourage self-evaluation of projects by the partners themselves and cross-evaluation within specific clusters to achieve group learning effects. In this sense, evaluation is intended to strengthen program delivery, to build better research capacity and to disseminate lessons learned. Appropriate methods and tools will be selected in each particular situation, with a preference for participatory and capacity-building approaches.

Closing the Loop

We will help our partners to analyse project results and distill recommendations for the use of policy- and decision-makers at national and local levels and to follow up on the use made of these results. Indeed, some of our projects will be packaged as research recommendations suitable for presentation to decision-makers. Whenever possible, projects will establish the participatory involvement of decision-makers at the outset. Also, we will cluster similar projects to enable group work in examining

new ways of influencing policy-making in specific aspects of ICTs. We will also explore future operational paradigms of development ISPs that we helped to establish in the past.

PAN Asia has already carried out closing-the-loop activities in specific areas. For example, in Mongolia, a group of top-level specialists associated with IDRC projects is forming a think-tank to formulate broad ICT policy recommendations. In the Philippines, the Multipurpose Community Telecentres project has been presented to Cabinet as a model for designing a large-scale government project aiming at connecting thousands of rural communities.

Managing Risks

Careful selection of committed grant recipients is crucial to minimizing risks associated with poor infrastructure, inadequate technology and lack of mid-level technical skills. In addition, decision-makers and politicians are relatively unaware of issues relating to ICTs and their potential for development. As a result, existing laws and regulations often hamper the development of new technologies. In other cases, the high cost of access to the Internet, which is often controlled by the state telecommunications company, confines its use to the elites and their institutions. The research focus of PAN Asia, which permits both testing and demonstration projects to demonstrate applied policy research requirements, can help to improve awareness and remove obstacles at the highest levels.

There is great potential to forge partnerships with other donors in least developed countries. On the other hand, donor agency collaboration is time-consuming and complex. We must therefore be flexible in working with donors. We must also be ready on occasion to act as the sole funder of projects, at least in the initial stages, when donor funding is not forthcoming.

In some countries, the government must approve all applied research. PAN Asia's participatory approach to applied research involves these coordinating ministries and thus represents a formidable channel for closing the loop in learning and development.

PARTNERSHIP AND COLLABORATION

PAN Asia will build on the successes of the first three years and will continue to pioneer new approaches to partnering and resource expansion.

PAN Asia's resource expansion efforts from 1997 to 2000 included a mix of projects involving parallel funding (\$400,000 CAD), co-funding (\$2.1 million CAD) and advisory services. In particular, the Government of Singapore's National Computer Board supported the PAN Asia multi-media web site as a potential test bed for ICT technologies and facilities for developing country institutions. As a consequence, PAN Asia has been contracted by the Asian Cultural Council, with support from the Rockefeller Foundation, to provide advisory services for nurturing Asian artists into an "e-savvy" capability.

The new ICT4D program is also reinvigorating discussions with a number of Canadian and international partners (e.g., the International Fund for Agricultural Development and the Asia Pacific Development Information Program of UNDP). PAN Asia will continue to explore partnerships with other ICT-interested donors as well, such as the Mekong Development Program Facility, administered by the International Finance Corporation of the World Bank. In addition, it will undertake discussions with the Asia Development Bank, which has just initiated a new ICT program, and with Canada's Department of Foreign Affairs and International Trade for a major ICT initiative for the Asia Pacific Economic Cooperation community.

Development projects in many different domains can benefit from advanced computer applications and from access to the expertise of PAN Asia. By the same token, PAN Asia can benefit from its partners' expertise in a whole range of areas, including natural resources management, social development, health care and environmental protection. We may consider joint activities such as workshops, web site content development or research projects.

Within the ICT4D Program PAN Asia will contribute resources to global collaborative initiatives (e.g., the Global Telecentre Helpdesk and Digital Video Documentary and Bellanet). The main area of collaboration will concern research results dissemination, sharing of lessons learned and multi-donor global initiatives. As well, private-sector companies like Global Sources and CISCO have approached PAN Asia to explore possible contributions to PAN Asia's project development.